RCEME TECHNICAL BULLETIN

Vol 4 No 1 1 Mar 59

RESTRICTED

RCEME TECHNICAL BULLETIN

NEW TOOLS AND EQUIPMENT

It is the aim of the Directorate to maintain the highest standard of tooling and test equipment in RCEME workshops. In order to keep abreast of the latest developments there is a continual assessment of new tools and equipment coming on the market. If the introduction of a new tool or piece of test equipment will result in a saving in manpower, a dollars-and-cents saving, or if it has some useful training value, authorization will be sought to include it in the appropriate entitlement document. Once this is done, the details will be supplied to workshops who may request it for inclusion in subsequent year's estimates, providing, of course, its inclusion can be justified.

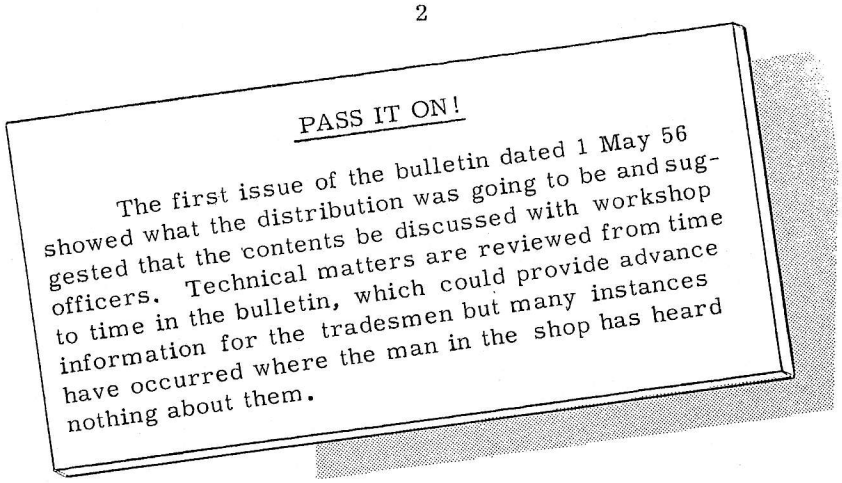
Similarly, if a new item comes to the attention of workshop commanders, they should report to DEME on its usefulness and suggest that it be assessed.

SUGGESTION AWARD

The Suggestion Award Committee has adopted a design for an MT tool submitted by Mr RL McCallum, a civilian employee of 212 Workshop RCEME, Shilo. This tool is now included in Workshop and MSS Scales as MT75211 Bending Tool, transmission throttle valve lever. It is used in servicing GMC hydra-matic transmissions.

CORPORATE MEMBERSHIP OF THE BRITISH INSTITUTE OF MANAGEMENT

The British Institute of Management has recently agreed to recognize successful completion of the REME Senior Management Course, RCEME Officers' School, Arborfield, Berks, as a qualification for Corporate Membership of the Institute so far as serving officers are concerned.


PASS IT ON!
The first issue of the bulletin dated 1 May 56 showed what the distribution was going to be and suggested that the contents be discussed with workshop officers. Technical matters are reviewed from time to time in the bulletin, which could provide advance information for the tradesmen but many instances have occurred where the man in the shop has heard nothing about them.

CANADIAN ARMY CATALOGUE OF GENERAL STAFF TRAINING PUBLICATIONS - 1956

Amendments have been submitted to DMT to enlarge the RCEME portion of the catalogue. It is in this publication that government publications by Canada, United Kingdom, and United States are listed.

STANDARD RCEME REFERENCE LIBRARIES

Plans are underway for introducing Standard Reference Libraries for Command, Area and Camp EMEs, field and static workshops and light aid detachments, probably within the next three or four months.

It will be expanded later to include RCEME School and our base workshops. The need for such a plan has become apparent with the current project of rewriting Trade Specifications.

PROCUREMENT OF HELICOPTERS

There is nothing new to report on procurement action for helicopters. However, the training program is progressing and to date 65 ORs have completed aircraft maintenance courses in the US. Most of these mechanics are now on attachment for in-job training with the RCN/RCAF.

Nine officers have received or are receiving special training on aircraft.

Twenty mechanics have passed an RCAF exam at Group 3 level in both the aero engine and airframe trades and one has passed both the instrument and the electrical trade exam at Group 3 level.

EASE OF MAINTENANCE FEATURES FOR MILITARY EQUIPMENTS

The final draft of Canadian Army Equipment Policy Statement No. Q1 has now been produced by DEME. This policy statement entitled "Ease of Maintenance Features to be Considered in the Design and Selection of Equipment for Military Use", is about to be submitted to the Equipment Policy Committee for their approval.

Technical Section

ARMAMENT

Nitrogen Pressure Tests

The indirect method of measuring nitrogen pressure in recoil mechanisms will be used whenever possible to avoid the loss of nitrogen which occurs with the direct pressure test. In addition, valve wear which may result in future leaks will be reduced.

Obturator Pad

A new pad is undergoing test for use on the 155 mm How. This pad nearly simulates the co-efficient of thermal expansion of steel and should privide a better form of obturation with less likelihood of failure. Shims are required when fitting this pad. It has not yet been introduced into the service.

INSTRUMENTS

Fuze Setters M28

An instruction has been prepared to modify Fuze Setters M28 with the new type pawl and will be released when stores become available.

Lights Instrument M37

A modification to correct an error in manufacture of the Canadian light is now completed. Because of the restricted use of the light, the modification will only apply to those lights for use with the 81 mm mortar. The modification will be controlled on a program basis and will be carried out by 202 Base Workshop only.

Sights Periscopic AFV No. 1 Mk 2 and 3

A modification to provide automatic electrical connection to the Mk 2 and Mk 3 Sights when used with the modified mounting and range gear will shortly be released. This modification affects the objective prism, and unit spares of the prism should be modified at the same time as the periscope.

Telescope, Panoramic, Cdn No. 1 Mk 1 and 2

Equipment Failure Reports have been received affecting the Azimuth scale adjustable. The failure has been investigated and a modification instruction is being issued to overcome this difficulty. No further EFRs are required.

Cementing of Optical Elements

A new adhesive, Part No. 8040-00-266-0828 for optical elements is being issued to workshops. It consists of a 4-oz bottle of cement and a sealed vial of catalyst, both in liquid form. EME Manual Instruments A277 Issue 2, detailing the techniques for using this compound, will be published shortly.

SMALL ARMS

Rifle 7.62 mm, FN, (C1)

Instances have occurred where rifles have fired out of battery causing considerable damage to components. This defect has been attributed to pierced primers resulting in carbon and brass particles building up in the firing pin hole in the breech block and a burr setting up on the forward edge of the slot in the firing pin. Eventually this condition causes the firing pin to jam in the forward position.

Armourers should examine the breech block to ensure that the firing pin is free and that the firing pin hole is clear. Spent cases should be examined frequently for pierced primers. When pierced primers are encountered samples of the spent casings should be retained and the lot number of the ammunition reported to AHQ through normal channels.

A considerable number of EFRs have been received reporting that the minimum bore gauge will not pass through the barrel. As a result, the use of this gauge has been temporarily suspended. It has been determined that the amount of restriction in the barrel is slight and would not be detrimental to functioning. Rifles in this condition may be fired without restriction.

The end result will probably be to recall the gauge and rework to a reduced dimension. Details will be forwarded at a later date.

Rifle Automatic 7.62 mm, FN, (C2)

General issue of the C2 rifle to units will commence approx 1 Apr 59. EME Manual Instructions are being prepared and should be available by 1 May 59.

Early reports received on first off-production rifles, revealed weakness in the method of attaching the foot to the leg of the bipod, resulting in the foot breaking loose. A brazing operation has now been added to overcome this weakness.

It is requested that all failures of this nature be reported on EFRs; serial numbers of weapons affected are necessary.

VEHICLES

Servicing and Inspection Procedures

The servicing and inspection procedure for all vehicles was revised last year and EME Manual Vehicles A 153 Instr 1 Issue 7 was distributed to all concerned. The various amendments issued and comments received from commands during the year have now been incorporated in Issue 8 of this instruction.

Repair expenditure limits for SC vehicles

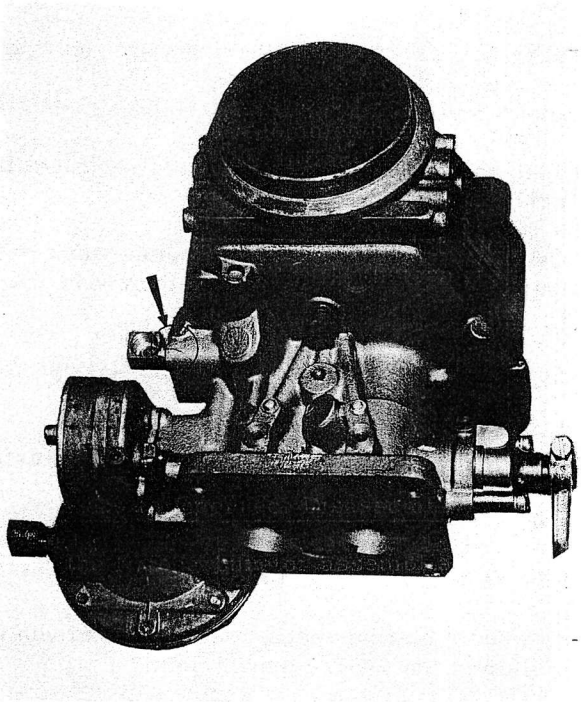
The frequency, extent, and cost of repair of most standard commercial vehicles is excessive when compared with their age and milage. EME Manual Vehicles A 114 Instr 1 is being rewritten to introduce revised expenditure limits for their repair and will amplify previous instructions on this subject.

Carburetor Damage due to Incorrect Disassembly

A number of the N/S carburetor assemblies on 2 1/2 ton trucks which are returned to 204 Base Workshop for rebuild have a crack in the body at the fuel inlet boss (see photo). It is felt that this failure is due to improper disassembly of the flared tubing nut and the brass 90-deg elbow.

The nature of the crack indicates an excessive side thrust is being applied to the carburetor body by the elbow. This likely occurs on disassembly through neglecting to support the elbow with a second wrench while loosening the flare nut. This incorrect practise coupled with a weak point in design results in an excessive number of failures.

Tradesmen and supervisors should be particularly careful with this carburetor, and the point specially mentioned during in-job training.



ELECTRICAL

Test Set Electron Tube TV-7C/U

The test data book in the Test Set TV-7C/U is known to be difficult to use. Action has been taken recommending changes to future editions that should overcome some of the difficulty. This book is published by the US Dept of the Army.

A simple approach to the above problem is the local preparation of data book pages. These pages could list the common tube alpha-numerically or by radio set type.

Unlisted Tube Types

The following information is provided pending official publication of data on unlisted CV tube types.

a. Tube type 12Y4-CV 523, and ARDD1-CV 1300 are electrically equivalent. Selector settings are DUO-1050 and DUO-2050. All other conditions are as shown for 12BU6 diode tests.

b. Tube type ARP-3 is a CV 1321.

HOW WOULD YOU RATE YOUR TELEPHONE PERSONALITY ?

DO YOU:

1. Fail to identify yourself when answering your phone at work?

2. Forget to take a message, or take a garbled, incomplete one?

3. Interrogate the caller with questions like "Who's calling?" and "What do you want?"

4. Leave the caller hanging for several minutes while you look up some facts, without first asking if he would rather have you call him back?

5. Carry on a conversation in your office while talking to someone on the phone.

6. Let the phone ring three or four times before answering?

7. Talk with a cigar, cigarette, or pencil in your mouth?

8. Bang down the receiver?

9. Just hang up when a call has been misdirected to you instead of transferring the caller to the proper department?

10. Fail to keep handy information you are likely to be called about?

11. Repeatedly interrupt a caller in mid-sentence?

12. Speak so indistinctly that you are asked to repeat several times?

13. Dial a wrong number because you thought you remembered it?

14. Have someone else place your calls for you?

15. Ask the long-distance operator to call you back when your party is on the line?

16. Sign off abruptly without giving the caller a chance to finish?

— Dun's Review

Applied RCEME Management

STATISTICS

General

The word "statistics" has two meanings which are different but related.

The first and more commonly used meaning is the plural of the word "statistic". In this sense statistics are a collection of facts presented in a form that can be understood easily.

The second meaning of statistics is the concept of the science and art of collecting, indexing, and analyzing statistical data and presenting the analytical results in a usable form.

Dangers of Statistics

Mark Twain once said "There are three kinds of lies – lies, damned lies, and statistics".

To some people, the reporting of statistics, such as the Time Accounting Return and the Workshop Loading Return, appears to be a pointless chore and when this is the case the accuracy of the figures is open to question. When an analysis is made of inaccurately reported figures, the results may be false and misleading.

"Figures don't lie but liars can figure". Cases have occurred in the past, are occurring now, and undoubtedly will continue to occur where statistics are abused (and not always accidentally) in a way that can lead to false conclusion. Subsequent examination of the facts usually leads to defensive explanations and loss of face.

One abuse of statistics lies in drawing conclusions from insufficient evidence. As an example, if a new piece of equipment is introduced, say a new vehicle, it is common for some people to panic at the failures that occur in the first 10 percent of the equipment life. Growing familiarity and experience with both handling and repair soon show the situation in better perspective and many first impressions will be reversed.

Another serious abuse is to form an opinion or draw a conclusion to begin with and then collect only sufficient evidence to support the original ideas. This is fatal when examination of the full facts later shows the original concept to be false. This abuse of statistics must be watched for especially when extensive or expensive plans may be based on these false premises.

Adding or averaging of percentages might be charitably called a danger rather than an abuse since it is a result of unfamiliarity with the mathematics of statistical analysis.

These are only a few of the possible dangers and abuses but as a final warning statistics should only be collected and analyzed when the end justifies the means. The collection of statistics requires an organized reporting system. The end use of the analyzed information must be of sufficient value to justify the reporting system and when possible should be understood by those submitting the reports.

Practical Applications

The big advantage of statistical analysis is that is compensates to some extent for deviations in reporting and provides results that improve in accuracy as the number of observations increase. This means some standards can be set statistically which cannot be accurately established in any other way. This is particularly so in the case of human behaviour patterns.

In direct application to RCEME workshop operations the most useful statistical management tools are the "Time Accounting Return" and the "Workshop Loading Return".

The format of the Time Accounting Return is arranged to give at a glance a picture of how effectively time is being used in each section. Where the figures shown deviate too far from national control limits then the individual time activity should be investigated and the condition corrected.

The Workshop Loading Return provides statistical standards of work content by equipment type. These standards will not apply to individual jobs except by coincidence but can be applied to the average of say one month's volume of work on 2 1/2 ton SMP vehicles in a given shop.

One purpose served by these standards of work content is to justify existing establishments and forecast establishment changes resulting from moving units geographically or changing equipment holdings. These standards cannot be applied blindly, but must be used as a starting point and adjusted to compensate for special local conditions.

At workshop level these standards can be used for long term load planning but again are subject to adjustment based on subsequent detailed inspection of the equipments.

At AHQ the Time Accounting Returns and Workshop Loading Returns are analyzed on a national basis to establish standards. In the past it has been common practice to justify variations in performance between workshops by leaning on the variations in environmental conditions and local policies. Analysis of reports on a national basis has shown that this is not entirely true and national standards can be applied effectively by local commanders to assess and improve their own operations.

The value of these standards as management tools is only as good as the statistical reports submitted by the workshops and companies. It is in the interest of local commanders, therefore, to ensure that TARs and WLRs submitted are accurate.

TOO LATE TO CLASSIFY

Truck 5 ton 6 x 6 SMP (All Models)
Mod Instr Veh G 907 Instr 15

Some of these vehicles equipped with carburetor 8327282 have been modified before issue to the Canadian Army by adding a degassing device on the carburetor and a dash panel hand control.

Do NOT modify these vehicles; simply make an entry in the vehicle history book that the modification has been completed.

who's where

LOCATION OF RCEME WARRANT OFFICERS

Class 1

Anscomb	GW	SRS List AHQ
Baynes	CH	1 Fd Wksp
Beddows	RS	1 Fd Wksp
Boshier	R	8 Coy RCEME
Brennan	RS	The RCEME School
Brown	AT	11 Coy RCEME
Brown	JD	202 Base Wksp
Buck	WM	The RCEME School
Churchill	CA	ADE
Clarke	DL	3 Fd Wksp
Conway	RF	2 Fd Wksp
Coupland	GE	202 Base Wksp
Cozens	SD	The RCEME School
Dillon	TF	ADE
Dodds	TH	The RCEME School
Dudley	J	5 Coy RCEME
Fernets	JM	202 Base Wksp
Fox	HR	DEME
Gallier	H	The RCEME School
Gladwin	CH	10 Coy RCEME
Gourlay	CV	The RCEME School
Gray	P	DEME
Greenham	IL	204 Base Wksp
Guilfoyle	ME	LdSH (RC) LAD
Hayes	JW	DEME
Houlton	VH	DEME
Hunder	BAJ	1 LAA Regt LAD
James	JW	RCAC School
James	LG	13 Coy RCEME
Kaufman	DC	202 Base Wksp
Keech	HL	DEME
Knight	RA	4 Fd Wksp
Langford	WH	20 Coy RCEME
Lawson	RW	10 Coy RCEME
Leach	FH	AHQ C&D Estb
Leon	BU	12 Coy RCEME
Leonard	WV	14 Coy RCEME
Lewis	SM	1/8 Cdn H LAD
Lowry	LH	DCER
MacDonald	DJ	16 Coy RCEME
MacDonald	J	RCD LAD
McCague	LT	204 Base Wksp
McDonald	DB	The RCEME School
McKinnon	JC	6 Coy RCEME
Malmberg	WG	DEME
Mercer	JL	The RCEME School

Neil	T	1 Fd Wksp
Norbury	G	13 Coy RCEME
Owen	LR	7 Coy RCEME
Patterson	DJ	CADEE
Richardson	W	202 Base Wksp
Rivers	AM	3 Coy RCEME
Riley	GA	DEME
Robertson	WG	DEME
Rowe	AW	The RCEME School
Shaw	JE	4 Fd Wksp
Sherman	CG	DEME
Sloan	H	4 Coy RCEME
Snell	JD	ADE
Tatham	J	56 Cdn Inf Wksp
Thivierge	AJ	ADE
Turner	CM	ADE
Turner	K	ADE
Walsh	IS	16 Coy RCEME
Wash	DC	2 Coy RCEME
Weston	ET	14 Coy RCEME
Wright	WA	11 Coy RCEME
Young	RD	6 Coy RCEME

Class 2

Adams	RMJ	204 Base Wksp
Allen	EB	1 CIBG LAD
Ambler	J	2 Fd Wksp
Anderson	JS	202 Base Wksp
Anderson	SB	1 Fd Wksp
Armstrong	JH	The RCEME School
Axford	DS	DEME
Baker	CJ	3 Coy
Balmer	AJ	16 Coy
Barrett	S	2 Coy RCEME
Boisvert	L	5 Coy RCEME
Both	TA	6 Coy RCEME
Bougie	I	202 Base Wksp
Brooks	LF	204 Base Wksp
Broomer	TF	4 Coy RCEME
Brunton	AC	2 CIBG LAD
Burnett	JH	DEME
Byer	DE	7 Coy RCEME
Campbell	DN	The RCEME School
Cassidy	GP	The RCEME School
Champagne	DJ	202 Base Wksp
Chapman	R	204 Base Wksp
Chisholm	LF	204 Base Wksp
Christensen	AJ	202 Base Wksp
Clarke	DC	13 Coy RCEME
Clyde	KT	204 Base Wksp
Cochrane	HM	3 Coy RCEME
Coles	JC	DEME
Coughlin	AF	202 Base Wksp
Coughran	GE	10 Coy RCEME
Crane	CE	The RCEME School
Cross	FT	204 Base Wksp
Cunningham	JM	2 Fd Wksp

Dainty	HW	8 Coy RCEME
Dance	GN	10 Coy RCEME
Dand	RJM	20 Coy RCEME
Davis	FAE	11 Coy RCEME
Deans	AG	4 Fd Wksp
Dew	AE	10 Coy RCEME
Dewar	J	DEME
Doherty	E	202 Base Wksp
Doherty	SF	5 Coy RCEME
Dorey	EE	RCD LAD
Dormer	NH	3 Fd Wksp
Drake	EA	6 Coy RCEME
Drew	CV	ADE
Drobot	W	204 Base Wksp
Duncan	FP	4 CIBG LAD
Elliott	JR	56 Cdn Inf Wksp
Elliott	WEC	1 RCHA LAD
Evans	RL	DEME
Ewert	CD	12 Coy RCEME
Fairbairn	TM	10 Coy RCEME
Foley	HEF	3 RCHA LAD
Ford	RC	1 CIBG LAD
Ford	RLC	14 Coy RCEME
Fryer	JWA	3 Fd Wksp
Geitzler	LW	6 Coy RCEME
George	AG	4 Coy RCEME
George	LJ	LdSH (RC) LAD
Gibbs	BF	4 Fd Wksp
Gill	DE	DEME
Given	RJ	202 Base Wksp
Glenn	W	3 Coy RCEME
Graham	AA	10 Coy RCEME
Graham	JC	2 Fd Wksp
Gribble	DL	1 LAA Regt LAD
Griffin	GW	10 Coy RCEME
Gunn	WH	11 Coy RCEME
Hammond	GT	ADE
Hanash	J	10 Coy RCEME
Hardy	JR	56 Cdn Inf Wksp
Harper	JM	3 Coy RCEME
Harvey	LM	C&D Estb CAS (Washington)
Hawton	HW	204 Base Wksp
Healy	TW	DEME
Henderson	KW	D Pers
Hewison	RW	3 Fd Wksp
Hicks	AL	6 Coy RCEME
Hinton	WG	202 Base Wksp
Hirsch	AL	8 Coy RCEME
Hooper	TC	56 Cdn Inf Wksp
Hurd	LR	DEME
Hutley	HA	14 Coy RCEME
Jackson	AF	C&D Estb AHQ
Jackson	O	The RCEME School
James	AM	11 Coy RCEME
Janssen	MEJ	2 RCHA LAD
Johnson	GM	3 CIBG LAD
Johnson	WA	7 Coy RCEME
Johnstone	T	HQ Wescom "I" Staff

Joyner	EF	CADEE
Kelly	HA	ADE
Kelly	MP	12 Coy RCEME
Keogan	MJ	1 Fd Wksp
Kirkpatrick	AM	13 Coy RCEME
Knox	CD	202 Base Wksp
Kraemer	KE	The RCEME School
Lanthier	H	3 Coy RCEME
Lasuta	W	1/8 Cdn H LAD
Lauret	JE	4 Fd Wksp
Lawrence	BJ	12 Coy RCEME
Lee	KA	The RCEME School
Lee	WE	202 Base Wksp
Legg	FG	2 Fd Wksp
Leon	GR	1 Fd Wksp
Lewis	CB	11 Coy RCEME
Little	JE	202 Base Wksp
Longley	GM	4 Fd Wksp
Low	GA	202 Base Wksp
MacFarlane	A	204 Base Wksp
Mackclaine	WB	1 Fd Wksp
MacLellan	EB	202 Base Wksp
MacPhee	DM	4 Coy RCEME
Maguire	GK	DEME
Main	T	HQ RCEME Pracom
Mallett	JG	202 Base Wksp
Marston	CV	HQ RCEME Wescom
Mason	J	2 Fd Wksp
Maw	A	14 Coy RCEME
Maxwell	AC	18 Coy RCEME
McBlane	AG	DEME
McCaffrey	LE	2 Fd Wksp
McDonell	AT	3 Fd Wksp
McDow	KA	2 CIBG LAD
McElroy	JC	3 Fd Wksp
McGovern	PMJ	DEME
McInnes	DM	10 Coy RCEME
McIntyre	WA	2 Fd Wksp
McLeod	HAT	The RCEME School
McLeod	I F	HQ RCEME Eascom
McLeod	MH	DEME
McMurchy	WS	202 Base Wksp
Meloche	JR	4 CIBG LAD
Melvin	GR	1 Fd Wksp
Miles	CW	The RCEME School
Milne	HC	4 CIBG LAD
Myatt	WC	3 Fd Wksp
Myrtle	PG	2 Coy RCEME
Nelson	EC	4 Coy RCEME
Nicolson	A	10 Coy RCEME
Oakes	GAM	11 Coy RCEME
O'Grady	CL	3 Fd Wksp
Parker	JC	204 Base Wksp
Patterson	MP	204 Base Wksp
Peacock	GG	DEME
Pennie	FM	10 Coy RCEME
Perrin	WG	The RCEME School
Pineo	MC	5 Coy RCEME

Press	J	CADEE
Price	EC	56 Cdn Inf Wksp
Proud	VS	204 Base Wksp
Redmond	FT	The RCEME School
Reid	J	DEME
Renaud	JOP	8 Coy RCEME
Reynolds	GA	4 Coy RCEME
Rhodes	AP	202 Base Wksp
Roberts	RE	COA "I" Staff
Robertson	DW	204 Base Wksp
Roche	WD	202 Base Wksp
Rochefort	EA	202 Base Wksp
Rodd	FL	DEME
Rose	AG	4 RCHA LAD
Roy	PRG	1 Coy RCEME
Rutherford	FA	13 Coy RCEME
Sambrook	JV	DEME
Schleihauf	GH	202 Base Wksp
Sedger	CA	11 Coy RCEME
Seeley	HR	HQ RCEME Cencom
Seguin	RH	DEME
Silzer	J	7 Coy RCEME
Simpson	WG	2 Coy RCEME
Sinclair	L	204 Base Wksp
Smith	DBR	The RCEME School
Smith	GE	3 Coy RCEME
Smith	GW	1 Fd Wksp
Smith	J	SRS List AHQ
Smith	LWC	DEME
Smyth	WC	RCD LAD
Spachman	JH	202 Base Wksp
St Pierre	G	The RCEME School
Stacey	JF	DEME
Stever	JD	202 Base Wksp
Stewart	RH	204 Base Wksp
Stirton	J	204 Base Wksp
Storbo	RM	11 Coy RCEME
Streeter	WE	202 Base Wksp
Stringer	AJ	HQ Pracom "I" Staff
Szumlanski	J	1 FGH LAD
Taylor	RT	4 Fd Wksp
Thomas	GA	C&D Estb CAS (Washington)
Thompson	JT	14 Coy RCEME
Toms	FA	202 Base Wksp
Upthegrove	WOR	2 Coy RCEME
Walker	RL	7 Coy RCEME
Warmington	JW	3 Coy RCEME
Wasney	J	HQ RCEME Quecom
Watt	JB	11 Coy RCEME
Weaver	CR	1 Fd Wksp
Wilkinson	EJ	202 Base Wksp
Wilson	RR	1 CIBG LAD
Wright	EO	The RCEME School
Young	RJ	16 Coy RCEME

How To Write An Administrative Appreciation

INTRODUCTION

Like all similar tasks there is no one correct way to write an administrative appreciation. The task can be made simple, however, if a definite procedure is used rather than a haphazard discussion of items, factors, etc. The following procedure has been used successfully by many administrative staff officers.

WHAT IS AN APPRECIATION

It is a system of mental reasoning which permits the author to analyse a problem in a logical orderly fashion and to arrive at a reasonable plan of action or a correct decision.

The average person seems to find a great deal of difficulty in making an appreciation. In trying to follow exactly the format given in "Staff Duties in the Field" he loses track of what he is trying to accomplish which results in an exercise in minor staff duties. The format and procedure used should make it easier to arrive at a decision than by any other means, and should not result in contributing something which "fights the problem".

An administrative appreciation may result in a decision, conclusion,or plan depending on the aim. Regardless of the final paragraph, the following questions must always be answered.

a. WHO - is to act?

b. WHAT - is to be done?

c. WHEN - must it be done?

d. WHERE - is it to be done?

e. HOW - is it to be done?

f. WHY - is it to be done?

These items are not necessarily all unknowns but from the moment an appreciation is commenced you must seek the answers to these questions.

THE AIM

The first step in any appreciation is to answer the question "Exactly what must I do?" The answer to this is the aim which is the key to any appreciation. It is worthwhile spending sufficient time on the aim to ensure it is letter perfect, as a clear concise aim is required for a good appreciation.

The aim in some cases is easy to define, as when your superior asks, "Should our storemen be RCEME or RCOC personnel?" The aim of the appreciation could then be stated, "To determine whether storemen in RCEME units should be RCEME or RCOC".

In another case he may say, "The heat's on and we've got to show a money saving somewhere. How about motion picture projectors? It seems to me we are spending too much money for an overhaul". Here we have a situation where a limiting factor appears in the aim, which might be expressed: "To determine a more economical system for the overhaul of motion picture projectors."

However, there may be other limitations on the scope of your investigations such as, "You can forget Model 32; they are just about out of circulation" or "You should aim at having this in effect by 2 Jan 60."

The following should therefore be considered when stating the aim:

a. Know the limitations imposed.

b. Avoid a double or doubtful aim. If your understanding of the aim implies two tasks you might do better to make two appreciations instead of one.

c. It must be within reasonable bounds. It would be unreasonable to say "To determine the vehicles by types requiring engine replacement annually to 1970." It would be unreasonable to attempt to determine this statistically because by 1970 both our equipment and repair patterns will have changed.

By the time you have stated your aim you will have eliminated one or several of the unknowns. In the example "To determine a more economical system for the overhaul of motion picture projectors", we now know WHAT is to be done, and WHY it is to be done. Every step in the appreciation will further limit the variables and eliminate the unknowns. We will consider this example further as our discussion progresses.

FACTORS AND DEDUCTIONS

The major difficulty in this part of an appreciation seems to be caused by not knowing:

a. The meaning of the three words, fact, factor and deduction.

b. How to determine what the factors are.

Let us first define the three words:

a. Fact - A thing known to have occurred or to be true.

b. Factor - A circumstance, fact, or influence contributing to a result.

c. Deduction - To produce by reasoning an inference from the general to the particular.

You must constantly remind yourself during your writing of an appreciation that:

a. ONLY factors which affect the aim should be considered.

b. Each factor to be of use must be followed by a deduction.

The next step in writing your appreciation is to make a list of factors. Since the author knows from his knowledge of the subject and the situation, the type of information required to make a decision or plan, he can produce a list of factors by asking questions of the aim.

Let us once again use the example of the motion picture projectors. First, the overriding factor is cost of repairs. Costs however result from many factors; manpower, tooling, accommodation, freight, civilian contracts, etc. Whether it is cheaper to do the job at point "A" rather than point "B" is not important if the facilities do not exist at "A". What factors must be assessed to determine whether we have the facilities; manpower, tooling, accommodation, etc.

As you can see, a pattern will develop and it becomes apparent that any list of factors must include manpower, accommodation, and tooling. There are others, of course; here we have reduced the problem to its simplest form. The factors should be listed so that you may consider first those which will have the greatest effect or will limit the scope of the appreciation.

Now under the heading of each selected factor will be listed all the facts as you know them. During this listing you are going through a process of mental reasoning, so you will not list any item from which you cannot make a deduction affecting your aim.

From the facts we will produce the meat of the appreciation - deductions. What type of deduction must we make? The following is a guide.

a. The best deductions are in terms of positive action.

b. Contradictory deductions are useful and need not be avoided.

Positive deductions permit you to arrive at a conclusion and so are preferred. In other words if you can say "must" instead of "can" or "should" you can limit the scope of your appreciation by making an immediate conclusion.

Deductions that seem to contradict each other are useful too, as they immediately indicate there are at least two courses open. In the consideration of the factors, we are looking for specific answers to WHEN, WHERE and HOW, and our deductions should be in the form of answers or partial answers to these questions.

If there are a large number of deductions, a summary will assist the reader by focusing his mind on what has been determined up to this point. This summary should contain only the important deductions, showing how much weight the writer attaches to each. While this will usually be found at the end of the consideration of the factors, there is no reason why one cannot be included at any point during the argument. In a complicated appreciation, a summary part way through the consideration of the factors may be most useful to show what has been determined before tackling a new stage in the appreciation.

COURSES

The next step is to answer the question "What are the ways in which I can achieve my aim?" This brings the author to the consideration of the courses open.

A major error committed by some people is the inclusion of courses which were eliminated in the discussion of the factors. Each of the courses considered must be a possible course and arise logically out of the writer's consideration of the factors.

If only one course remains open to you after a consideration of the factors, you should not manufacture a second course just to knock it down in an assessment of the courses. In the classic appreciation the course to be adopted always appears last. It is quite obvious you do not know which is the correct course to adopt until the assessment of the courses, and so for your draft or verbal appreciation the courses are listed in any order. However, it helps the reader of your work if you list last the course which you prefer, or which it is concluded you must adopt.

The courses you produce from your deductions will differ only in technique and not in principle. It is extremely difficult to compare and assess courses which are diametrically opposed. In such a case the advantages of one course will always be the disadvantages of the other and vice versa.

In order to produce a comparison
be something in common.
the assessment of

Quoting on

Course "A"

Course "B" -

The two courses a
local contract is contained in
such items as direct costs, indirect
turn-around time, etc.

If your appreciation produced the following two courses, however, it would be much more difficult to produce an assessment or comparison:

Course "A" - To overhaul in the Winnipeg workshop.

Course "B" - To overhaul by local contract in Montreal.

Here you not only have the geographic variables of time and space, but a difference of principle.

After your assessment of the courses you should conclude with a positive statement such as "I must adopt Course "B" because .....".

CONCLUSION/PLAN

At this point the major work of the appreciation is completed and you will now display your new-found knowledge in a manner which will satisfy your superiors. Using our example again, assume we have decided to adopt Course "B" which is "To overhaul by local contract in Montreal". Now you will cover the procedures that must be followed to get the projectors to Montreal: backloading or repair re-allocation, allotment of funds, inspection, re-issues, etc. Sufficient information must be included so that someone other than you can write the necessary orders and instructions.

An appreciation should always be signed by the author, who is presumed to be an expert in his field. This enables persons in the future to refer to the individual if additional information or explanation is required.

SUMMARY

Spend as much time as required in study of the problem to develop a clear concise aim.

During your consideration of the factors continually look for specific answers to the WHAT, WHERE, WHEN, WHY, HOW and WHO. Do not generalize.

In developing your courses avoid the common error of discussing a course which you have already concluded is impracticable or impossible.

Include enough information in your conclusion/plan to enable someone to write the executive order.